

MAR 14 2007

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**REMARKS**

Claims 1-15 are in the application as filed. Claim 7 has been cancelled. Claims 16-17 were added via a previous amendment.

**REJECTION UNDER 35 USC 112**

Claim 1 was rejected as the amendment tendered with the previous response recited particle size but didn't indicate that the particle size as average. Claim 1 has been amended to properly indicate the average particle size and states "wherein the conductive functional material has an average particle size (D<sub>50</sub>) of 0.1 to 1.2 microns".

**REJECTION UNDER 35 USC 102(b)**

Claims 1-2, 4-8, 11-13 and 15 were rejected as anticipated by DE 19846096. This reference is also directed to nano-sized materials, i.e. . . . up to 100 nm. The above amendments also avoid this DE 19846096 reference.

Claims 1-6, 8-9 and 11-17 were rejected under 35 USC 102 (e).over Kodas et al. (US 2003/0175411). As noted in applicants' previous response, Kodas et al described ink jetting precursor compositions of electronic conductor, resistor and dielectric compositions. The precursors are soluble organometallic materials. The precursor solution of the Kodas reference refers to a precursor or mixture of precursors dissolved in a solvent. Kodas et al also mentioned that nano-sized particles could be mixed with precursor compositions. Applicant's claims are directed to a method of using jet compositions with large particles and a low viscosity, at the same time. Applicant's conductive functional materials are not metal precursors. Applicant respectfully directs the Examiner's attention to Paragraph's 0078 to 0118 of Kodas et al. In Kodas, the precursor compositions exploit combinations of solvents and precursors that advantageously provide high solubility of the molecular precursor while still allowing low temperature conversion of the precursor to the conductive phase. Kodas et al is not ink jetting the conductive material of the present invention. It is ink jetting a precursor solution.

**REJECTION UNDER 35 USC 103**

Claim 3 is rejected as obvious over DE 19846096. in view of Grant (US 6,555,205) or Kodas et al. US 2003/0175411. Grant and Kodas are apparently cited as modifying the

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substrate. It is clear that those cited references do not produce the currently claimed process. The examiner also further points out that Kodas does not claim the specific type of monomer used in the present application.

Claim 10 is rejected under 35 USC 103(a) as unpatentable over Kodas et al. in view of Adkins (US 6,379,444). Kodas was described in detail, above. Adkins is drawn to ink-jet ink and uses specific monomers to enhance curability.

Claim 2 is rejected as obvious over Hirai (US 1003/01/46019).

Claims 1, 4-6, 11-13 and 15-16 are rejected over Harai. Applicants again respectfully disagree that their claims are anticipated by Harai. Hirai discloses a composition with nano-sized particles. Applicant has, in the present amendment, restricted the size of its functional material in Claim 1 to a particle size to an average of 0.1 to 1.2 microns (see specification at p. 5). In a dependent claim, applicant has restricted the particle size to a range of 0.3 to 0.8 microns for an average particle size (D50). In claim 1 we have also indicated that D100, the maximum particle size of the functional material (now conductive material) is 5 microns or less. This differs from Hirai.

Claim 3 is rejected as obvious over Hirai (US 1003/01/46019) in view of either Grant et al (US 6,555,205) or Kodas et al.(US 2003/0175411). We have discussed these three references above. The Examiner notes that there are differences between the parent invention and the art. These reference do not, either alone or in combination, teach the presently claimed methods.

The Examiner notes that one difference between the present application and Hirai and Loria is a pretreating step. Grant and Kodas are cited as modifying the substrate. It is clear that the cited references do not produce the currently claimed process.

Claim 8 is rejected as unpatentable over Hirai in view of Zhu et al. (US 6,241,175).

Claim 10 is rejected over Tucker in view of Adkins. We have already discussed the differences between the present method and Hirai and and Tucker. Tucker is a non-analogous process. Tucker can be seen as in a slightly different art. It is teaching a composition for use in creating colored contact lens. There is no teaching in this reference of creating an electronic circuit. In Tucker, the colorant is a dye or pigment (the reference lists some metal oxides). Tucker does not teach a process of using of an electrically conducting functional material such as these of some of our disclosed conductors. (See spec. p. 4).

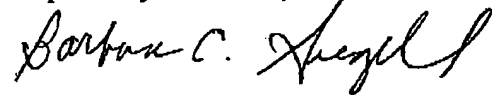
In view of the foregoing discussion, allowance of the Claims 1-16 is respectfully requested.

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If anything further is needed to advance the allowance of this application, the Examiner is urged to contact applicant's attorney at the telephone number below.

Respectfully submitted,



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